

Docket No.: 4564-001

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

William M. OWENS

Serial No. 09/053,832

Filed: April 1, 1998



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: Group Art Unit: 3724
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: Examiner: Goodman Charles
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For: FEEDWORKS DEVICE

REQUEST FOR REINSTATEMENT OF APPEAL UNDER 37 CFR 1.193(b)(2)

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Sir:

Pursuant to 37 CFR 1.193(b)(2), Appellant hereby requests reinstatement of the appeal filed August 8, 2002.

Respectfully submitted,
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(1704)
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Attn: BOARD OF PATENT APPEALS AND INTERFERENCES

SUPPLEMENTAL APPEAL BRIEF

This paper is a Supplemental Appeal Brief filed under 37 CFR 1.193(b)(2) with a request for reinstatement of the appeal filed August 8, 2002.

This Supplemental Appeal Brief is transmitted in triplicate.

This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. § 1.192(c)):

- I. Real Party in Interest.
- II. Related Appeals and Interferences.
- III. Status of Claims.
- IV. Status of Amendments.
- V. Summary of Invention.
- VI. Issues.
- VII. Grouping of Claims.
- VIII. Arguments.
- IX. Appendix of Claims Involved in the Appeal.

The final page of this brief bears the attorney's signature.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is William Owens.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There is a total of 23 claims in the application, which are identified as claims 9-13 and 15-32.

B. Status of all the claims

1. Claims cancelled: none
2. Claims withdrawn from consideration but not cancelled: 9-13
3. Claims pending: claims 9-13 and 15-32
4. Claims allowed: none
5. Claims rejected: claims 15-32

C. Claims on Appeal

Claims on appeal are claims 15-32 as rejected by the April 8, 2003 Office Action.

IV. STATUS OF AMENDMENTS

A Response is concurrently filed herewith to address Examiner Goodman's objection to the specification manifested in the April 8, 2003 Office Action.

The Response does not include claim amendments.

V. SUMMARY OF INVENTION

The invention relates to a mechanism to move material, e.g., wooden boards, through a processing unit, e.g., a cutter, so that the material remains in constant orientation to the processing unit as it passes through the processing unit. *See* page 1, lines 5-9 of the original specification. An objective of the present invention is to maintain the alignment of the material with the processing unit without marring the surface of the material to be processed. *See* page 2, lines 4-7 of the original specification. This objective of the present invention can be achieved without using spikes or side clamping. *See* page 2, lines 1-3 of the original specification and page 2, lines 9-10 of the Affidavit/Declaration signed June 26, 2000.

The above objective is obtained by an apparatus of the present invention (best seen in Fig. 2) which comprises input and output conveyors (10, 41) installed in series and spaced apart from each other for carrying material to be processed in a working direction, and a processing unit (23, 24) disposed between the input and output conveyors for processing the material. *See* page 3, lines 19-20 and page 4, lines 21-23 of the original specification. Each of the input and output conveyors includes an endless belt (10, 41) trained around a pair of input-side (8, 43) and output-side (42, 34) pulleys. *See* page 3, line 28 through page 4, line 4 of the original specification. Each endless belt (10, 41) has a non-skid upper surface (28, Fig. 5) adapted to carry the material and a lower opposing surface (29, Fig. 6) provided thereon with a guiding strip (30, Fig. 6) extending longitudinally of the endless belt. *See* page 3, lines 20-27. The input-side (8, 43) and output-side (42, 34) pulleys have horizontal axes of rotation. The endless belts (10, 41) are trained around the respective pulleys (8, 43, 42, 34) with the non-skid upper surfaces (28) facing outwardly and the guiding strips (30) extending in a plane

substantially parallel with the working direction. Each of the pulleys (8, 43, 42, 34) has a groove (31, Fig. 4) extending continuously circumferentially around the pulley and in the plane for engaging the respective strip (30) as can be seen in the Figures. See also page 4, lines 7-13 and page 5, lines 6-9 of the original specification.

The strips (30) and grooves (31) cooperate to prevent transverse displacements of the endless belt with respect to the working direction. See page 4, lines 7-13 of the original specification.

The strips (30) and grooves (31) together with the non-skid upper surfaces (28) prevent transverse displacements of the material to be processed with respect to the working direction. See page 2, lines 10-18 and page 4, lines 7-13 of the original specification.

In accordance with an aspect of the present invention, the apparatus additionally has hold-down members (11, 19, in Fig. 2) having non-marring surfaces for pressing the material against the non-skid surface (28) so that the material maintains a constant orientation to the processing unit (23, 24). See page 5, lines 6-10 of the original specification.

In accordance with another aspect of the present invention, a method of using the apparatus of the present invention to feed the material to be processed to the processing unit is provided. The method comprises the steps of carrying the material on the non-skid upper surface of the input conveyor toward the processing unit, processing the material with the processing unit, and carrying the processed material on the non-skid upper surface of the output conveyor away from the processing unit. The unique arrangement of the apparatus of the present invention permits the material to be fed in and out without positive lateral edge contact with the apparatus. See Fig. 3 and page 5, lines 3-18 of the original specification.

VI. ISSUES

The rejections raised in the April 9, 2002 Final Office Action were apparently withdrawn by Examiner Goodman's April 8, 2003 Office Action in view of the October 8, 2002 Appeal Brief and January 17, 2003 Substitute Brief.

The following new issues are raised by Examiner Goodman in the April 8, 2003 Office Action and will be addressed in this Supplemental Appeal Brief:

A. First Issue

The first issue is whether Examiner Goodman was correct in rejecting claims 15, 18-21 (sic) and 25-32 under 35 U.S.C. 103(a) as being unpatentable over *Chambers* (U.S. Patent No. 5,637,068) in view of *Conrad* (U.S. Patent No. 4,449,958) and *Baranski* (U.S. Patent No. 4,681,005).

B. Second Issue

The second issue is whether Examiner Goodman was correct in rejecting claims 16-17 and 23-24 under 35 U.S.C. 103(a) as being unpatentable over *Chambers* in view of *Baranski* (sic) as applied to claims 15, 18-22 and 25-32, and further in view of *Zimmerman* (U.S. Patent No. 4,009,741).

Claim 22 is not expressly addressed in the April 8, 2003 Office Action. However, the language of the Office Action indicates that Examiner Goodman rejects claim 22 under 35 U.S.C. 103(a) as being unpatentable over *Chambers* in view of *Conrad* and *Baranski* (First Issue). Appellant will proceed accordingly.

The language of the Office Action also indicates that Examiner Goodman rejects claims 16-17 and 23-24 under 35 U.S.C. 103(a) as being unpatentable over *Chambers* in view of *Conrad* and *Baranski* as applied to claims 15, 18-22 and 25-32, and further in view of *Zimmerman*. Appellant will proceed accordingly.

VII. GROUPING OF CLAIMS

For purposes of this Supplemental Appeal Brief only, the claims have been grouped as follows:

- Group I. Claims 15, 18-22 and 25-32
- Group II. Claims 16-17, 23-24

The Appellant respectfully asserts that claims in each group are separately patentable, and thus, the claims do not stand or fall together.

VIII. ARGUMENTS

A. First Issue

35 U.S.C. 103(a) rejection of claims 15, 18-22, 25-32 as being unpatentable over *Chambers* in view of *Conrad* and *Baranski*

Examiner Goodman rejects claims 15, 18-22, and 25-32 under 35 U.S.C. 103(a) as being unpatentable over *Chambers* in view of *Conrad* and *Baranski*. The following are Examiner Goodman's main arguments:

a) *Chambers* seems to inherently teach the claimed input-side and output-side pulleys.

b) Belts with notch grips have been disclosed as commercially available and therefore this feature is obvious.

c) In the alternative, Examiner Goodman holds that it would have been obvious to provide the device of *Chambers* with the input-side and output-side pulleys, the endless belt having a guide strip with V-shaped notches, and each of the pulleys having a groove as taught and suggested by *Conrad* and *Baranski* in order to facilitate positive tracking of the belt and thereby the work to be cut wherein the belt exhibits enhanced tracking around the respective pulleys due to the notches thereon. See page 5 of the April 8, 2003 Office Action.

With respect to argument a), the Examiner must provide "a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis added). See also *MPEP*, section 2112. Since Examiner Goodman failed to provide an adequate basis in fact and/or technical reasoning in support of his "inherency" allegation, the allegation is inappropriate and, therefore, traversed.

With respect to argument b), Examiner Goodman is kindly reminded that the fact that "all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (emphasis added). See also *MPEP*, section 2143.01. In this case, Examiner Goodman clearly failed to specify an objective reason why a person of ordinary skill in the art would have been motivated to combine the commercially available elements in the claimed manner.

With respect to argument c), it appears that Examiner Goodman proposes to provide the *Chambers* endless belt with pulleys and teeth as taught by *Conrad* for enhanced training around the pulleys, and to further modify the *Chambers/Conrad* device with *Baranski* to include a guide strip instead of the teeth to arrive at the claimed invention. Appellant will proceed accordingly.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). *MPEP*, section 2143.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis added).

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (emphasis added).

Appellant respectfully submits that the references, especially the *Chambers/Conrad* combination and *Baranski*, are not properly combinable in the manner proposed by Examiner Goodman for lack of an adequate suggestion or motivation to further modify the *Chambers/Conrad* combination with *Baranski* as stated in page 5, lines 5-11 of the April 8, 2003 Office Action.

First, it is unclear from the language of the April 8, 2003 Office Action as to why a person of ordinary skill in the art would have been motivated to replace the *Conrad* teeth in the *Chambers/Conrad* combination with a continuously extending strip as taught by *Baranski*, i.e., how the *Chambers/Conrad* combination would benefit from such a modification. The *Conrad* teeth are provided for tracking and/or advancing the belt. The *Baranski* strip, as argued by the Examiner, is provided for the same purpose. However, *Baranski* is completely silent on whether its strip is superior to or has any advantage over the *Conrad* teeth. Absent some actual suggestion or motivation, it would not have been obvious to combine *Baranski* with *Chambers* and *Conrad* as suggested by Examiner Goodman.

Second, *Conrad* teaches away from Examiner Goodman's proposed combination with *Baranski*. As correctly noted by Examiner Goodman in page 4 of the April 8, 2003 Office Action, the *Conrad* tooth/notch arrangement maximizes the flex of the belt during movement around the respective pulleys. A person of ordinary skill in the art would at once recognize that replacing the *Conrad* teeth with a continuously extending strip as taught by *Baranski* would make the *Chambers/Conrad* belt stiffer and, hence, defeat the "flexible" advantage of *Conrad*. Thus, the person of ordinary skill in the art would not have been motivated to make Examiner Goodman's proposed combination of *Baranski* with the *Chambers/Conrad* combination, especially in the absence of teachings of any other advantage of the *Baranski* strip.

Third, *Baranski*, contrary to Examiner Goodman's allegation, fails to teach or suggest a ridge/groove arrangement for tracking the belt. *Baranski* relates to a bottom roller feed machine in which wood is fed into and through a cutting zone 82, 84 by a plurality of rollers

44. *See* Fig. 3 of *Baranski*. To properly position wood on the rollers 44, a fence 42 is provided. The fence 42 of *Baranski* is a rotary fence having components substantially as described in pages 4-5 of the April 8, 2003 Office Action. To further ensure proper tracking of the wood, pressure rollers 86 are provided opposing the fence 42. Then, wood will be placed between and grasped by the fence 42 and pressure rollers 86. The fence 42 has a continuous belt 80 which rotates to force wood in and through the cutting zone 82, 84. The *Baranski* rotary fence 42 is disposed vertically as shown in Fig. 3 of the reference.

Ridge 156 in belt 80 (Fig. 5 of *Baranski*) is not explicitly described by *Baranski* as being able to facilitate positive guidance and accurate positioning of belts 80 by preventing lateral movement of the belts during the longitudinal movement thereof, as alleged by Examiner Goodman. *Baranski* is silent as to functions of ridge 156. A reasonable reading of the *Baranski* reference should be that, since belt 80 is disposed vertically, ridge 156 is provided as a support for belt 80 against gravity rather than as a tracking guide. In a horizontally disposed belt like in the *Chambers/Conrad* combination, ridge 156 of *Baranski* becomes redundant.

Appellant must now conclude that there is no adequate suggestion or motivation to properly combine the references, especially *Baranski* with the *Chambers/Conrad* combination, as suggested by Examiner Goodman.

Fourth, even assuming that the references were combinable, they would not be combinable in the manner proposed by Examiner Goodman. This is because *Baranski*, when considered as a whole, discloses a different way, and hence a different structure, to maintain precise orientation of the wood in the wood working machine, that is, to use external devices (i.e., fences and rollers) to avoid lateral movement of the wood. As a result, a person of ordinary skill in the art facing the problem of the present invention, upon learning of the *Baranski* teachings, would have been led away from the claimed structure.

Indeed, a person of ordinary skill in the art would have been motivated, at best, to provide the apparatus of *Chambers* and *Conrad* with rotary fence 42 or the combination of fence 34 and rollers 86 as taught by *Baranski* to provide a machine which is automatically adjustable and capable of processing wood of various sizes within a predetermined size range without interrupting the sawing process for changes in the size of the wood, and which has a rotatable fence for urging the wood through the machine. *See* col. 2 lines 26-35 of *Baranski*.

The person of ordinary skill in the art would not have been motivated to further modify the *Chambers/Conrad* conveyor belts. Apparently, the above described hypothetical device does not have all limitations of the claimed invention, i.e. input and output conveyors each including an endless belt, with a guiding strip, trained around pulleys having horizontal axes of rotation, as recited in independent claim 15.

Appellant must now conclude that independent claim 15 is not obvious over the applied references.

It should now be clear that Examiner Goodman failed to establish a prima facie case of obviousness. The 35 U.S.C. 103(a) rejection of independent claim 15 is erroneous and should be reversed. Dependent claims 16-31 and independent claim 32 are patentable at least for the reason advanced with respect to claim 15. Claims 16-32 are also patentable on their own merit since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

As to claims 19-21, the applied art of record fails to disclose, teach or suggest the claimed V-shaped notches extending from the top face toward, **without contacting** with, the opposing surface. *Conrad*, as applied by Examiner Goodman, teaches many embodiments all having notches touching the belt. See e.g. Figs. 2-5 of *Conrad*.

It should be noted that *Conrad* is not modifiable to include the “non-contacting” claim limitation due to the *Conrad* purpose of maximizing the flex of the belt, as noted by Examiner Goodman in the April 8, 2003 Office Action. See also column 1, lines 61-65 of *Conrad*.

Claims 19-21 are thus separately patentable and do not stand or fall together with other claims in the group.

As to claims 28-30, the applied art of record fails to disclose, teach or suggest the claimed **work bed**. See Fig. 1 of *Chambers*. Examiner Goodman argued in the last paragraph on page 5 of the April 8, 2003 Office Action that it would have been obvious to modify the device of *Chambers* with “workbed” 114 as taught by *Baranski* in order to facilitate positive tracking of the endless belt in the region of work load where the work is not supported by the pulleys.

Appellant respectfully disagrees, because *Baranski* does not teach the desirability of “positive tracking of the endless belt in the region of work load where the work is not supported by the pulleys” as Examiner Goodman alleged. The sole and primary purpose of wear strip 114 of *Baranski*, as apparent to a person of ordinary skill in the art, is to provide support for ridge 156 of vertically disposed belt 80 against gravity. See Fig. 5 of *Baranski*. In a horizontally disposed belt like in the *Chambers/Conrad* combination, wear strip 114 as well as ridge 156 become redundant. Thus, a person of ordinary skill in the art would not have been motivated to additionally provide the *Chambers/Conrad* combination with the *Baranski* “workbed.”

Claims 28-30 are thus separately patentable and do not stand or fall together with other claims in the group.

As to claim 32, the applied art of record fails to disclose, teach or suggest the claimed limitation that the material to be processed be conveyed on the non-skid upper surface of the endless belt **without positive lateral edge contact** with a fence or other part provided in the processing apparatus. This limitation is clearly supported by at least Fig. 3 of the present application. The applied art, e.g., *Baranski* when considered as a whole, expressly requires that the wood be placed against a fence (42 of *Baranski*). This teaching of *Baranski* cannot be disregarded and must be considered in a *Chambers/Conrad/Baranski* combination. In the invention, the non-skid surface of the invention in combination with the groove/strip advantageously avoid the needs for a lateral fence and maintaining a positive lateral pressure pressing the wood against a fence.

Claim 32 is thus separately patentable and does not stand or fall together with other claims in the group.

Conclusion

For the extensive reasons shown above, Appellant respectfully requests that the 35 U.S.C. 103(a) rejection of claims 15, 18-22, 25-32 as being unpatentable over *Chambers* in view of *Conrad* and *Baranski* be reversed.

B. Second Issue

35 U.S.C. 103(a) rejection of claims 16-17, 23-24 as being unpatentable over Chambers in view of Conrad and Baranski and further in view of Zimmerman

Examiner Goodman rejects claims 16-17 and 23-24 under *35 U.S.C. 103(a)* as being unpatentable over *Chambers* in view of *Conrad* and *Baranski* and further in view of *Zimmerman*.

Appellant respectfully traverses this rejection for at least the reasons advanced with respect to independent claim 15 from which claims 16-17, 23-24 depend.

The rejection of claim 17 is also traversed because the applied art of record fails to disclose, teach or suggest the claimed **passively-driven** pulleys. As can be seen in Fig. 3 of *Zimmerman*, as applied by Examiner Goodman, none of the pulleys 40a-f are passively driven. See also belts 48, 50, 52, 54, 56 of *Zimmerman*. Appellant fails to understand why Examiner Goodman stated that the other pulleys of the respective pairs are passively driven. See page 6, line 11 of the April 8, 2003 Office Action. It is clear from FIG. 3 of *Zimmerman* that all pulleys 40a-f are directly driven by motor 44 via driving belts 48, 50, 52, 54, 56.

Claim 17 is thus separately patentable and does not stand or fall together with other claims in the group.

Conclusion

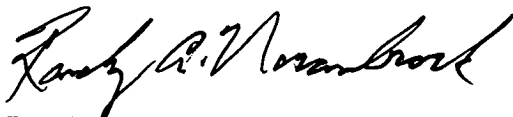
For the reasons shown above, Appellant respectfully requests that the *35 U.S.C. 103(a)* rejection of claims 16-17, 23-24 as being unpatentable over *Chambers* in view of *Conrad* and *Baranski* and further in view of *Zimmerman* be reversed.

Each of Examiner Goodman's rejections has been traversed. Accordingly, Applicant respectfully submits that all claims on appeal are considered allowable. Accordingly, reversal of Examiner Goodman's art rejections is believed appropriate and courteously solicited.

If for any reason this Supplemental Appeal Brief is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned, Applicant's attorney of record.

Respectfully submitted,

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IX. APPENDIX OF CLAIMS INVOLVED IN THE APPEAL

15. A processing apparatus, comprising:

input and output conveyors installed in series and spaced apart from each other for carrying material to be processed in a working direction, each of said input and output conveyors including

an endless belt having an non-skid upper surface adapted to carry said material and a lower opposing surface provided thereon with a guiding strip extending longitudinally of said endless belt; and

a pair of input-side and output-side pulleys having horizontal axes of rotation around which said endless belt is trained with said non-skid upper surface facing outwardly and said guiding strip extending in a plane substantially parallel with the working direction, each of said pulleys having a groove extending continuously circumferentially around said pulley and in said plane for engaging said strip, thereby preventing transverse displacements of said endless belt with respect to the working direction; and

a processing unit disposed between said input and output conveyors for processing said material.

16. The apparatus of claim 15, wherein said output-side pulley of said input conveyor and said input-side pulley of said output conveyor are driven by a single power unit to rotate at substantially the same speed.

17. The apparatus of claim 16, wherein said input-side pulley of said input conveyor and said output-side pulley of said output conveyor are passively driven by said output-side pulley of said input conveyor and said input-side pulley of said output conveyor, respectively, via said endless belts of said input and output conveyors, respectively.

18. The apparatus of claim 15, wherein said strip has two side faces and a top face all extending longitudinally of said endless belt, said sides faces tapering away from said opposing surface and ending at said top face.

19. The apparatus of claim 18, wherein said strip is provided with a plurality of V-shaped notches distributed longitudinally of said endless belt and extending from said top face toward, without contacting with, said opposing surface.

20. The apparatus of claim 19, wherein said grooves of said pulleys are in constant contact with said strip.

21. The apparatus of claim 19, wherein said strip extends continuously throughout an entire length of said endless belt.

22. The apparatus of claim 15, wherein said groove has a shape conforming to a shape of said strip.

23. The apparatus of claim 15, further comprising at least one hold-down member having a non-marring surface for pressing said material against said non-skid surface.

24. The apparatus of claim 23, wherein said at least one hold-down member further has a pneumatic cylinder loaded arm for pressing said non-marring surface against said material.

25. The apparatus of claim 15, wherein said endless belt has an upper portion traveling in the working direction, and said processing unit includes at least one saw blade rotatable in a plane substantially perpendicular to said upper portion.

26. The apparatus of claim 25, wherein said at least one saw blade is rotatable about an axis co-elevational with said input and output conveyors.

27. The apparatus of claim 15, wherein said groove has a width in a direction transverse to the working direction smaller than that of said endless belt.

28. The apparatus of claim 15, further comprising a work bed disposed immediately beneath a portion of said endless belt, which travels in the working direction, for bearing at least a partial weight of said material.

29. The apparatus of claim 28, wherein said work bed is disposed horizontally.

30. The apparatus of claim 28, wherein said work bed includes another groove extending in the working direction in alignment with said groove, said another groove having a shape conforming to that of said strip for engaging said strip.

31. The apparatus of claim 15, wherein said apparatus is formed without a fence arranged to otherwise provide a lateral edge contact with the material being carried by at least one of said input and output conveyors.

32. A method of processing material, comprising the steps of:

a) providing a processing apparatus comprising input and output conveyors installed in series and spaced apart from each other for carrying the material to be processed in a working direction, each of the input and output conveyors including an endless belt having a non-skid upper surface adapted to carry the material and a lower opposing surface provided thereon with a guiding strip extending longitudinally of the endless belt, and a pair of input-side and output-side pulleys having horizontal axes of rotation around which the endless belt is trained with the non-skid upper surface facing outwardly and the guiding strip extending in a plane substantially parallel with the working direction, each of the pulleys having a groove extending continuously circumferentially around the pulley and in the plane for engaging the strip thereby preventing transverse displacements of the endless belt with respect to the working direction, said apparatus further comprising a processing unit disposed between the input and output conveyors for processing the material;

b) carrying the material on the non-skid upper surface of the input conveyor toward the processing unit;

c) processing the material with said processing unit; and

d) carrying the processed material on the non-skid upper surface of the output conveyor away from the processing unit

wherein steps b) and d) are performed without positive lateral edge contact of the material with said apparatus.